Amendments to the Claims

Listing of Claims:

This listing of claims will replace the listing of claims in the application.

1. (original) An exposure apparatus comprising:

a projection optical system for projecting a pattern of a mask onto a substrate; and

a fluid supply unit for supplying a fluid between said projection optical system and the substrate, said fluid supply unit including an injection unit for injecting carbon dioxide into the fluid.

2. (original) An exposure apparatus according to claim 1, wherein said fluid supply unit includes a degassing unit for degassing the fluid, said degassing unit being located at an upstream side of the injection unit.

3. (currently amended) An exposure apparatus according to claim 1, ~~or 2,~~ wherein said injection apparatus includes a membrane module for injecting the carbon dioxide.

4. (currently amended) An exposure apparatus according to ~~any one of claims 1 to 3~~ claim 1, wherein the injection unit injects the carbon dioxide at a concentration of the carbon dioxide in the fluid between 0.02 ppm and 750 ppm.

5. (original) An exposure apparatus according to claim 4, wherein the injection unit injects the carbon dioxide at the concentration of the carbon dioxide in the fluid between 0.06 ppm and 300 ppm.

6. (currently amended) An exposure apparatus according to ~~any one of claims 1 to 3,~~ claim 1, wherein the fluid supply unit includes a resistivity meter for measuring a resistivity value of the fluid, and the injection unit injects the carbon dioxide based on a measurement result of the resistivity meter.

7. (currently amended) An exposure apparatus according to ~~any one of claims 1 to 3 and 6,~~ claim 1, wherein the injection unit injects the carbon dioxide so that a resistivity value of the fluid is between 0.02 MΩ·cm and 10 MΩ·cm.

8. (original) An exposure apparatus according to claim 7, wherein the injection unit injects the carbon dioxide so that the resistivity value of the fluid is between 0.04 MΩ·cm and 5 MΩ·cm.

9. (original) An exposure apparatus comprising:

an illumination optical system for illuminating a mask using light from a light source; and

a projection optical system for projecting a pattern of the mask onto a substrate,

wherein a fluid supplied to a space between said projection optical system and the substrate has a concentration of carbon dioxide between 0.02 ppm and 750 ppm.

10. (original) An exposure apparatus according to claim 9, wherein the injection unit injects the carbon dioxide at the concentration of the carbon dioxide in the fluid between 0.06 ppm and 300 ppm.

11. (original) An exposure apparatus comprising:

an illumination optical system for illuminating a mask using light from a light source; and

a projection optical system for projecting a pattern of the mask onto a substrate,

wherein a fluid supplied to a space between said projection optical system and the substrate has a resistivity value between 0.02 MΩ·cm and 10 MΩ·cm.

12. (original) An exposure apparatus according to claim 11, wherein the injection unit injects the carbon dioxide so that the resistivity value between 0.04 MΩ·cm and 5 MΩ·cm.

13. (currently amended) A device manufacturing method comprising the steps of:

exposing an object using an exposure apparatus according to ~~any one of claims 1 to 12;~~ claim 1 and

developing the exposed object.

14. (new) An exposure apparatus according to claim 2, wherein said injection apparatus includes a membrane module for injecting the carbon dioxide.

15. (new) An exposure apparatus according to claim 2, wherein the injection unit injects the carbon dioxide at a concentration of the carbon dioxide in the fluid between 0.02 ppm and 750 ppm.

16. (new) An exposure apparatus according to claim 3, wherein the injection unit injects the carbon dioxide at a concentration of the carbon dioxide in the fluid between 0.02 ppm and 750 ppm.

17. (new) An exposure apparatus according to claim 2, wherein the fluid supply unit includes a resistivity meter for measuring a resistivity value of the fluid, and the injection unit injects the carbon dioxide based on a measurement result of the resistivity meter.

18. (new) An exposure apparatus according to claim 3, wherein the fluid supply unit includes a resistivity meter for measuring a resistivity value of the fluid, and the injection unit injects the carbon dioxide based on a measurement result of the resistivity meter.

19. (new) An exposure apparatus according to claim 2, wherein the injection unit injects the carbon dioxide so that a resistivity value of the fluid is between 0.02 MΩ·cm and 10 MΩ·cm.

20. (new) An exposure apparatus according to claim 3, wherein the injection unit injects the carbon dioxide so that a resistivity value of the fluid is between 0.02 MΩ·cm and 10 MΩ·cm.

21. (new) An exposure apparatus according to claim 6, wherein the injection unit injects the carbon dioxide so that a resistivity value of the fluid is between 0.02 MΩ·cm and 10 MΩ·cm.